

**Chief Scientist Roles and  
Responsibilities, and List of Priorities for Each  
Staffing Period and Chief Scientist and Shift  
Supervisor List of Responsibilities and Checklist for  
Each Shift**

**Appendix L**

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**Revision 02, March 2004**

## **Chief Scientist Roles and Responsibilities for Each Staffing Period (Survey Leg)**

- Conduct science meeting at start of survey and with each crew change
- Assure that sampling/analytical equipment and supplies are available for all scientific operations for each shift
- Verify that required SOPs are followed based on routine observations
- Assure that operations are implemented in a safe manner consistent with the GLNPO Health, Safety and Environmental Compliance Manual; discuss any concerns or questions with Chemical Hygiene Manager
- Data Management
  - Assure that all data has been collected, analyzed, and entered into the data entry tool
  - Assure maintenance on data entry tool has been done and database has been backed-up at the end of each shift, as according to the User's Manual for the Remote Data Entry Tool. Tuning also should be done at the end of each shift. Assure that output files are delivered to the GLENDa Database Manager.
  - Report any GLENDa Remote Data Entry Tool problems to the GLENDa Database Manager, Ken Klewin (312-886-4794), for correction
  - Assure that a copy of the hard-copy set of the data forms is made and placed in the designated file cabinet
  - Assure that the original hard-copy set of the data forms are brought back to GLNPO (QA Team representative - Marvin Palmer or his designee) at the end of a staffing period for internal review
  - Assure that soft-copies of the data forms are brought back to GLNPO (Database Manager - Ken Klewin) at the end of a staffing period for storage
  - Assure that SeaBird data files are processed at the end of a staffing period and returned to the database manager for storage

## **Chief Scientist Priorities**

Priorities for the Chief Scientist during the survey are listed below. In addition, a checklist of Shift Supervisor responsibilities for each shift is included in this appendix. The checklist must be completed by the Shift Supervisor for each shift and submitted to Marvin Palmer (QA Team representative).

### **Board Chemistry**

Assure that the shift supervisor competently initiates the "Board Parameters" and assures that the following reagents and standards are prepared as necessary and the listed tasks are completed.

1. Sufficient 0.02 N sulfuric acid for the lake
2. Alkalinity control concentration from commercial vial at beginning of season
3. Alkalinity control standards and check against 0.02 N H<sub>2</sub>SO<sub>4</sub> (as needed)
4. pH buffers
  - a. Control standards 9.18 and 6.86 from packets at beginning of season
  - b. Fill all standard and wash bottles from proper source at beginning of season
  - c. Refresh standard and wash bottles from proper source for each lake
5. Fill conductivity control standard bottles from large container
6. Assign lab sample numbers to each control standard and label accordingly. Each time a control standard bottle is filled, a new sampleID is assigned to that standard (except turbidity vial)
7. Place the DO reagents in their proper dispensers
8. Fill the thiosulfate apparatus, check standardization and analyze a saturated sample
9. Calibrate the conductivity apparatus and the turbidimeter
10. Verify that the pH meters are working properly and that the reference solution is at the proper level

## Data Management

The Data Manager should verify that the data input tool is operational and pre-loaded with the appropriate sample numbers before the cruise. The Chief Scientist should verify that the submissions for the lake have been prepared and if not, should prepare them as follows.

Name (of Submission)	=	Short-hand description of the submission in the format of "SURVEY_ID" plus "SV, F, or L" (i.e., ER0312-SV or ER0312-F or ER0312-L)
Project	=	Select from the drop-down list of pre-loaded projects (i.e., WQS-SP2003)
Data Contact	=	Chief Scientist for the specific survey leg (default of Glenn Warren, this should be changed to actual Chief Scientist after the cruise)
Description	=	Short description of the submission with additional text as needed (i.e., Lake Erie spring 2003 survey)
Data Type(s)	=	Station, Visit, Field, and Lab Data (last item on list)

## General Shipboard Operations

1. Assure that the hard copy forms & bottle labels are distributed to the proper personnel.
2. Check the 911 \*.con file to be sure that the current calibration factors are being used.
3. Verify that the altimeter is calibrated correctly.
4. Assure that the processed files from the 911 will contain depth, temp, DO, PAR, trans, fluor, pH, conductivity, specific conductivity, beam attenuation coefficient.
5. Assure that an adequate supply of bottles and closures are onboard.
6. Assure that the formazin turbidity standards are prepared.
7. At the master stations, compare the 911 data to the board data. DO, conductivity corrected to 25 degrees.
8. Assure that a plot of the 911 at teach station with depth, temperature, fluorometer, specific conductivity, beam attenuation and bottle closure is prepared, printed and saved as \*.jpg file. The heading should contain the latitude, longitude, and date in addition to stationID.

## Chief Scientist and Shift Supervisor Checklist and Responsibilities

## for Each Shift (12-Hour Period)

- Perform Board Calibration Procedure; pH
- Examine \*.btl file from Master Station Visit for DO comparison and reasonable values of all parameters and document here.

Visit ID	
SeaBird DO	
Non-azide Winkler DO	
Saturated Water Book Value DO	
Saturated Water Winkler DO	

Station					
Station Depth (check if completed)					
VisitID					
Secchi Depth (check if completed)					
SeaBird SRF Temperature (check if completed)					
Bottle Temperature (check if completed)					
Operations Complete* (check if completed)					

\*Operations include assuring all duties are accounted for or completed in order to conduct a successful crew change.

- Analyze Control Standards. In Control? If not, then describe corrective actions.
- Previous Shift Data Entered or Explanation
- Problems: \_\_\_\_\_
- Chief Scientist/Shift Supervisor: \_\_\_\_\_

**Shift Date/Start Time:** \_\_\_\_\_ **Ship Time:** \_\_\_\_\_